

**ABSTRACT OF THE DISCLOSURE**

A channel plan with a corresponding test plan are implemented in connection with a plurality of nodes that communicate signals. The channel plan has one or more predefined specifications for each of one or more signal channels on each of the nodes.

5 The channel plan may comprise a specification of the following, for example, for each of the channels: a label describing use of the corresponding channel, a center frequency, a bandwidth, a power level, information regarding the carrier roll-off, a default status indicator identifying whether the corresponding channel is currently allocated or reserved for future use, one or more default threshold levels for various  
10 tests, and an alternate center frequency that may be utilized by the corresponding channel. The channel plan enables a monitoring system to, among other things, conduct automatic periodic test plans, comprising tests, on the nodes, based upon the predefined data specified in the channel plan. Each test plan prescribes measurement of at least one signal parameter, pertaining to one or more nodes as a whole and/or to  
15 one or more channels contained within the nodes. The monitoring system includes a spectrum analyzer, a switch enabling the spectrum analyzer to interface with the nodes, and a controller controlling the switch and the spectrum analyzer. The controller is configured to enable creation of and display the channel plan and test plan, based upon user inputs. Notably, the test plan may include alarm limits that are triggered and  
20 tracked when a signal parameter of a node or channel exceeds an alarm limit.